

In the Claims

1. (original) A locking system (1) for a safety switch having a read head (2) and an actuator (3) which have first and second component sets (10, 14) respectively with electric and/or electronic structural elements which may be caused to interact without electric contact and thereby control the safety switch, it being possible to lock the actuator (3) on the read head (2) by means of a counterelement (12) operating in conjunction with a switchable electromagnet (7), and it being possible to control the locking by means of a sensor element (31, 32, 33, 34) the output signal of which is a function of the magnetic field which may be generated by the electromagnet (7), **characterized in that** the level of the locking force caused by the magnetic field of the electromagnet (7) may be controlled by the sensor element (31, 32, 33, 34).

2. (original) The locking system as claimed in claim 1, wherein the sensor element (31, 32, 33, 34) generates an analog output signal concerning the intensity of the magnetic field which may be generated by the electromagnet (7).

3. (currently amended) The locking system as claimed in ~~one of~~ claims 1 to 2, wherein the level of the locking force is adjustable.

4. (currently amended) The locking system as claimed in ~~one of~~ claims 1 to 3, wherein the sensor element (31, 32, 33, 34) measures the magnetic field which may be generated by the electromagnet (7) and, the geometric configuration and, the magnetic properties of the

read head (2) and of the actuator (3) being taken into account, determines from the measured magnetic field the locking force acting between read head (2) and actuator (3).

5. (currently amended) The locking system as claimed in ~~one of~~ claims 1 to 4, wherein the sensor element (31, 32, 33, 34) is mounted on the actuator (3).

6. (currently amended) The locking system as claimed in ~~one of~~ claims 1 to 5, wherein the sensor element (31, 32, 33, 34) is mounted on the read head (2).

7. (currently amended) The locking system as claimed in ~~one of~~ claims 1 to 6, wherein two switching states may be assumed by the sensor element (31, 32, 33, 34) as a function of the magnetic field which may be generated by the electromagnet (7), and *wherein* the second control group (14) mounted in the actuator (3) is controlled by the switching states of the sensor element (31, 32, 33, 34).

8. (currently amended) The locking system as claimed in ~~one of~~ claims 1 to 7, wherein a generator coil (35) is mounted in the actuator (3) for supply of electric energy to the second component set (14).

9. (original) The locking system as claimed in claim 8, wherein the sensor element (31, 32, 33, 34) is connected electrically in series to the generator coil (35).

10. (currently amended) The locking system as claimed in ~~one of~~ claims 1 to 9, wherein a plurality of sensor elements (31, 32, 33, 34) is configured the output signals of which are interconnected in a desired manner for the monitoring of locking.

11. (currently amended) The locking system as claimed in ~~one of~~ claims 1 to 10, wherein the position of the sensor element (31, 32, 33, 34) may be adjusted by adjusting means (30).

12. (currently amended) The locking system as claimed in ~~one of~~ claims 1 to 11, wherein the sensor element (31, 32, 33, 34) has a reed contact (37).

13. (currently amended) The locking system as claimed in ~~one of~~ claims 1 to 12, wherein the sensor element (31, 32, 33, 34) has a Hall element (38).

14. (currently amended) The locking system as claimed in ~~one of~~ claims 1 to 13, wherein the counterelement (12) and/or the electromagnet (7) is/are rigidly connected to an associated base element (13) mounted on the actuator (3) and accordingly the read head (2) but is/are pivotable relative to such base element (13).